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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,441

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Alan Flum

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10/27/2009

Stone Creek LLC

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EXAMINER

LEGASSE JR, FRANCIS M

ART UNIT

PAPER NUMBER

2878

NOTIFICATION DATE

DELIVERY MODE

10/27/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

alan@stonecreekpatents.com

Office Action Summary	Application No. 10/790,441	Applicant(s) FLUM ET AL.	
	Examiner FRANCIS M. LEGASSE JR	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 September 2009 has been entered.

Status of Claims

Claims 1, 4 and 5 are amended.

Claim 21 is entered as new.

Claims 1, 4, 5 and 17-21 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 5 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US 2001/0011497 A1, "Yamada", hereinafter) in view of Simon et al. (US Patent No. 5,900,930, "Simon", hereinafter) and Boyton (WO02/01160, US Patent No. 6,789,042 B2 will be used for reference).

Regarding claim 1, Yamada (*figures 1 and 2*) discloses a controller comprising:

- A rotatable platter (10) journaled for rotation, said rotatable platter including a top surface and a side circumferential skirt substantially perpendicular to said top surface;
- Said rotatable platter (10) disposed for direct user manipulation and rotation (jog dial for Disc Jockey,
- A displacement detecting optical system (19) comprising light receiving elements (23, 24), a light source (22), and a signal processor responsive to movement of said rotatable platter (10) based on information received and said optical system (19) including an output responsive to said rotatable platter (10) ([0028]).

Yamada fails to teach a side circumferential skirt including a random pattern, a relative displacement detecting optical system comprising a lens and image sensor, a signal processor responsive to relative movement of said rotatable platter based on information derived from said random pattern and said optical system being positioned

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to optically acquire surface sequential images from said random pattern of said side circumferential skirt and calculate differences in said sequential surface images of said random pattern thereby determining the direction and relative displacement of rotation of said rotatable platter; and said optical system including an output responsive to said rotatable platter.

Simon (*figure 1*) teaches a controller comprising: a rotatable platter (21) journaled for rotation, said rotatable platter including a top surface (see Fig. 1) and a side circumferential skirt (22) substantially perpendicular to said top surface (see Fig. 1); an optical system comprising a lens (28), an image sensor (in camera (24)), a light source (26) and a signal processor (see Col. 3, lines 32-52) responsive to relative movement of said rotatable platter based on information from said pattern; said optical system being positioned to optically acquire surface sequential images from said side circumferential skirt (see Fig. 7) and calculate differences in said sequential surface images thereby determining the direction and relative displacement of rotation of said rotatable platter (see Fig. 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the controller system of Simon in combination with the controller of Yamada because it provides another design alternative, thus eliminating the number of components required while still maintaining the ability for a user to manipulate the dial.

Yamada as modified by Simon fails to teach that the pattern on the circumferential skirt is random.

Boyston (*figures 3a and 3b*) discloses a random pattern (99) on a circumferential skirt (20) of an optical encoder (col. 1, lines 65-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the random pattern of Yamada as modified by Simon because it will enable the controller to be used in any particular environment, thus making it more adaptable to different devices or functions.

Regarding Claim 4, Yamada as modified by Simon and Boyston teaches (Simon: Fig. 7) said optical system is responsive to rotational velocity (124) of said rotatable platter.

Regarding Claim 5, Yamada as modified by Simon and Boyston teaches (Simon: Fig. 7) said optical system is responsive to rotational position (122) of said rotatable platter.

Regarding Claim 18, Yamada as modified by Simon and Boyston teaches said light source is a light emitting diode (LED) (see Col. 3, lines 53-62).

Regarding Claim 19, Yamada as modified by Simon and Boyston teaches said optical system is an optical navigation system (based on angular position- see Fig. 7).

Regarding Claim 20, Yamada as modified by Simon and Boyston (*Yamada: figures 1 and 2*) teaches a controller wherein the controller is used for a disc jockey application (Yamada: [0003]).

Regarding Claim 21, Yamada as modified by Simon and Boyston (*Yamada: figures 1 and 2*) teaches a controller wherein said top surface of said rotatable platter (10) disposed for direct user manipulation ([0037] and [0038]).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Simon and Boyston, as applied to claim 1, and in further view of Hinckley et al. (US Patent No. 6,844,871, "Hinckley", hereinafter).

Regarding Claim 17, Yamada as modified by Simon and Boyston (*Yamada: figures 1 and 2*) teaches a controller comprising a rotatable platter (10) but fails to teach a stationary base, wherein the optical system is fixed to with respect to the stationery base and that said rotatable platter has at least one degree of freedom of movement in addition to rotation, an extent of movement of said at least one degree of freedom of movement being determined by said optical system optically acquiring sequential images from said random pattern of said side circumferential skirt.

Hinckley teaches a similar device with determining various freedom of movements based on acquiring sequential images (see Col. 7, lines 49-59) of a textured pattern (see Fig. 28-32) including rotational movement (see Fig. 23 and Col. 11, lines 33-47) and at least one degree of freedom of movement (tilt) (see Fig. 13, 16) in addition to rotation, an extent of movement of said at least one degree of freedom of movement being determined by said optical system optically acquiring sequential images (see Col. 10, line 48 to Col. 11, line 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide said rotatable platter having at least one degree of freedom of movement in addition to rotation, an extent of movement of said at least one degree of freedom of movement being determined by said optical system optically acquiring sequential images from said circumferential skirt, as taught by Hinckley, in

the device of Yamada as modified by Simon and Boyston because it will provide improved sensing of the positional status of the rotatable platter for greater versatility of sensing.

Yamada as modified by Simon, Boyston and Hinckley fails to teach a stationary base, wherein the optical system is fixed with respect to the stationary base.

Boyston (*figure 3a*) discloses an optical encoder comprising a stationary base (5) wherein the optical system fixed with respect to the stationary base (5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the stationary base of Boyston in combination with the device of Yamada as modified by Simon, Boyston and Hinckley and Hinckley because it will ensure that the optical system is properly secured, thus enabling the device to provide accurate and reliable measurements.

References Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Segers, Jr. (US Patent No. 6,541,690 B1) discloses an optical encoder that is incorporated into a scratch effect controller.

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 5 and 17-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Francis M. LeGasse Jr whose telephone number is (571) 272-9798. The examiner can normally be reached on Monday through Thursday 7:00 am to 5:30 pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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